

# **INSTRUCTION BOOK**

**for the Model S141/735**

**WESTON MASTER II EXPOSURE METER**

# INTRODUCTION TO METERED PHOTOGRAPHY

## Brightness

Your exposure meter is designed to measure reflected light or brightness and not incident light. It is the reflected light which strikes the film in your camera and thus affects the exposure of the film. Both the incident light (i.e. the light falling on the subject) and the reflected light (or brightness) vary from scene to scene.

You can guess at exposures and get passable results and even good results on occasions. This is because some average subjects come within the margin of error from the correct exposure which modern films allow. But the eye is not a light measuring device which produces infallible judgement of correct exposures. Consider the brightness of your subject with the eye by all means, but use your exposure meter to measure that brightness with scientific accuracy to obtain real quality in your photographs.

## Exposure

Exposure is the product of the length of time the light from the scene acts on the film, multiplied by the amount of light striking it. At all times this product should be approximately the same for the same film. If the amount of light is small, the time would be long; if the amount of light is large, the time would be short.

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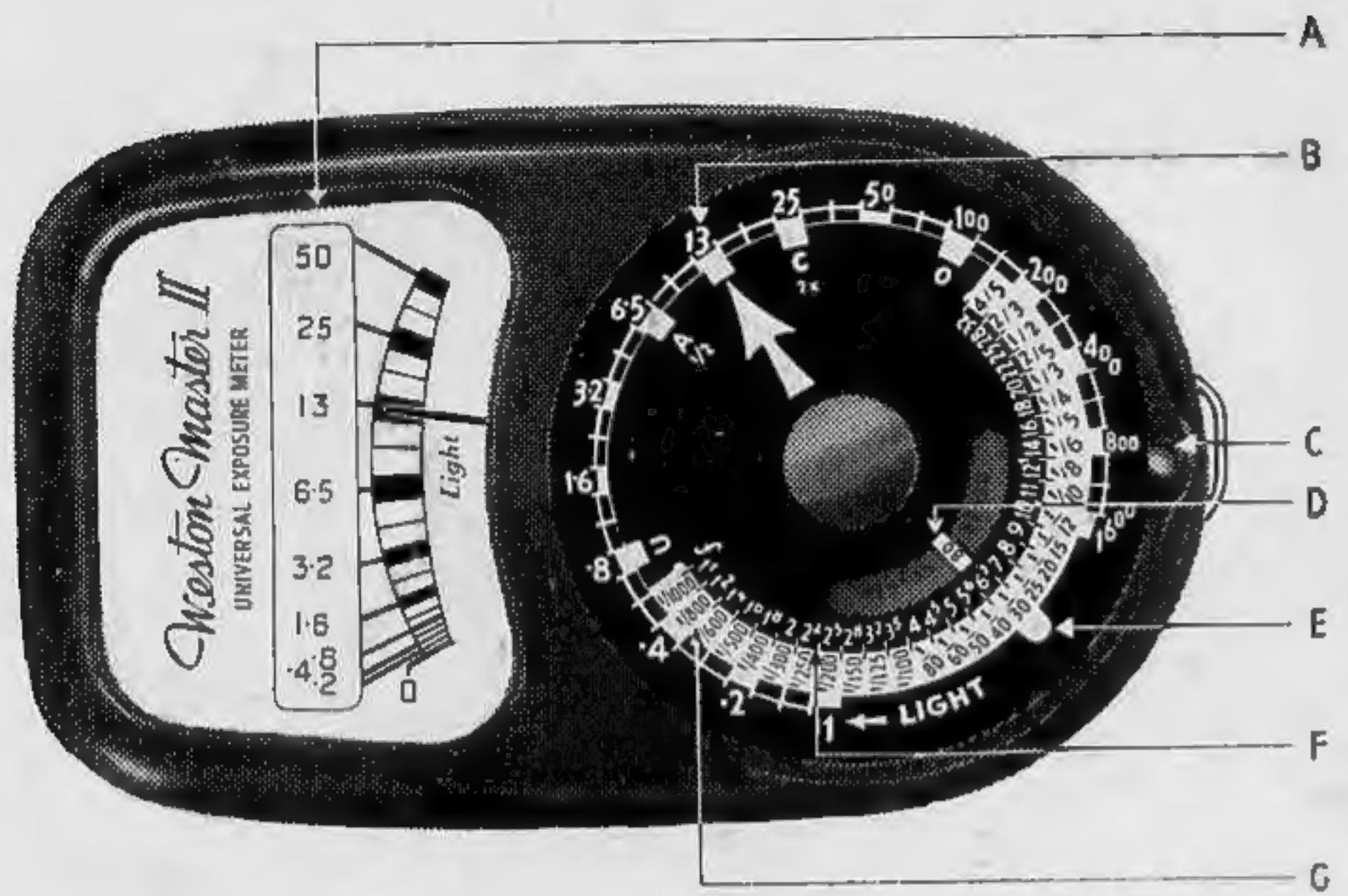
$$\text{EXPOSURE} = \text{Light} \times \text{Time}$$

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## Controls of Exposure

Since the light reflected from the scene is the light which will fall on the film, camera adjustments are necessary to compensate for changing scene light. The controls of exposure are the f/stop and shutter speed. The f/stop controls the amount of light and the shutter speed the length of time light acts on the film. The lower the f/stop number, the larger the aperture. On most cameras where the lens is mounted in the shutter, shutter speeds written as 2, 5, 10 are fractions of seconds, 2 being  $\frac{1}{2}$  etc.

# HOW TO USE YOUR



# WESTON MASTER METER

## 4. Unnumbered Divisions

When the pointer of the light scale lies on an unnumbered division or block, set the Arrow of the exposure dial in just the same way to the corresponding unnumbered division or block on the exposure dial.

## 5. High Light Scale

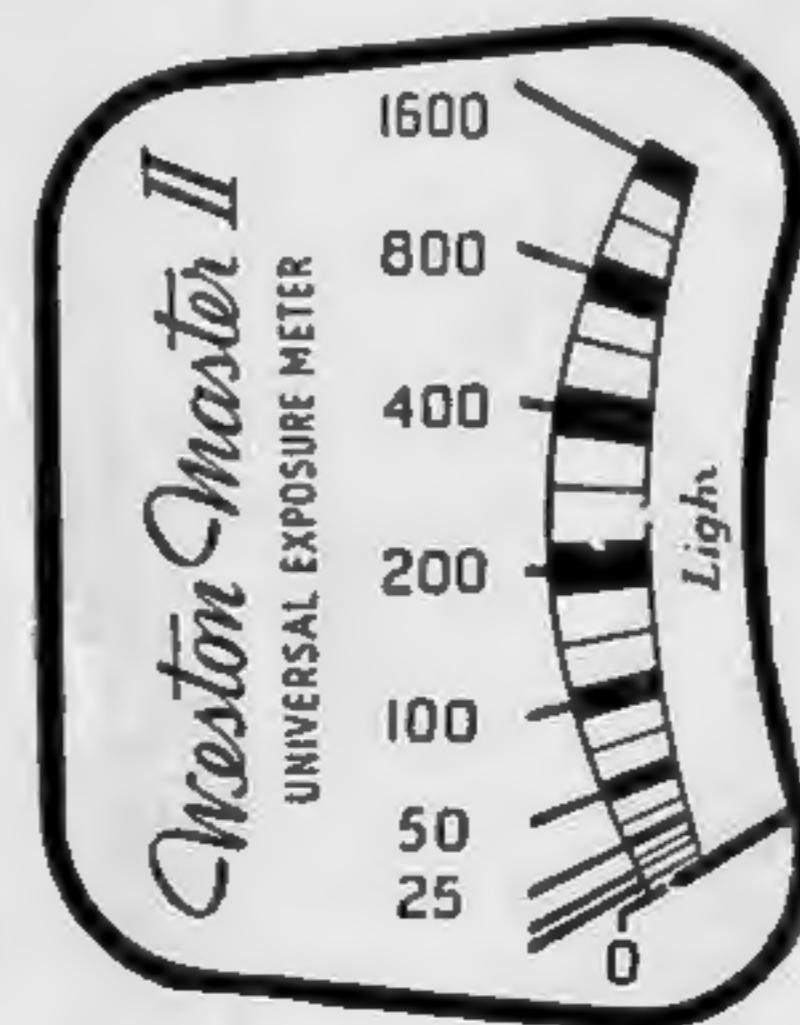
On the rear of the meter a hinged baffle will be found. The light sensitive photo cell is directly beneath the baffle. When the baffle is closed, the High light scale is in use. This scale measures from 0 to 1600 candles per square foot and is for use for all average and brightly lighted objects. Keep the baffle closed if the light reading is 50 or higher.

## 6. Low Light Scale

When the light reading is less than 50, open the baffle by releasing latch "H" and turn it back against the case so that the latch engages holding it wide open. The Low Light scale automatically appears measuring from 0 to 50 candles per square foot. The first division .2, or 1/5th candle per square foot, is a very low order of illumination even for indoor scenes.



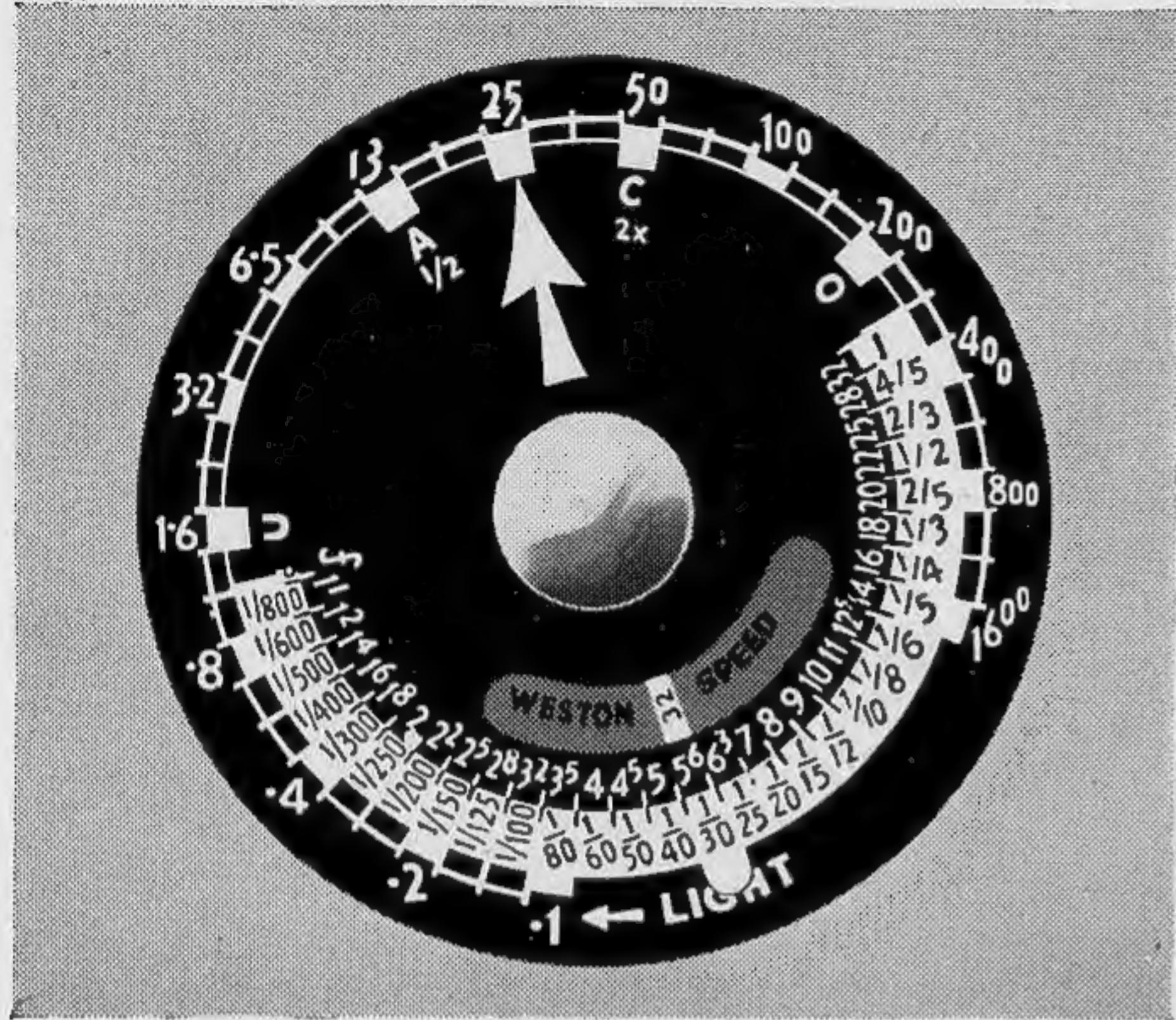
H. The baffle half open and the release latch "H."



J. High Light Scale 0-1600 candles per square foot.  
Low Light Scale 0-50 candles per square foot.



## SELECTING THE F/STOP



For each picture you take you have the choice of a number of different exposure combinations of f/stop and shutter speed. As the exposure dial is set on this page you might select an f/stop of f:6.3 at 1/25th sec. or an f/stop of f:22 at  $\frac{1}{2}$  sec. Any one of the combinations shown on the dial would result in a correct exposure (providing the figures taken were directly opposite each other) but the selection of the correct combination depends upon the requirements of the subject.

### Direct Reading Feature

A useful feature of the Master Meter is that with the baffle closed and at the following Film Speed and f/stop values, the light reading is a direct indication of the shutter speed required e.g. when the pointer indicates 100, the shutter speed required is 1/100th sec., etc.

Film Speed	f/stop
24	f:5.6
32	f:6.3
50	f:8
100	f:11
200	f:16

If the scene is an action one, select a fast shutter speed and use the f/stop directly opposite. If maximum depth is needed, then you can select a slower shutter speed with its corresponding smaller stop opening. Remember that the smaller the aperture the higher the f/stop number . . also that more of the objects will be in sharp focus when smaller stops are used.

In close ups or very near subjects, bear in mind that the depth of field covered by the lens is considerably reduced and that in order to obtain sharp definition over the parts of the subject nearest and most distant from the camera, the smallest possible f/stop should be used.

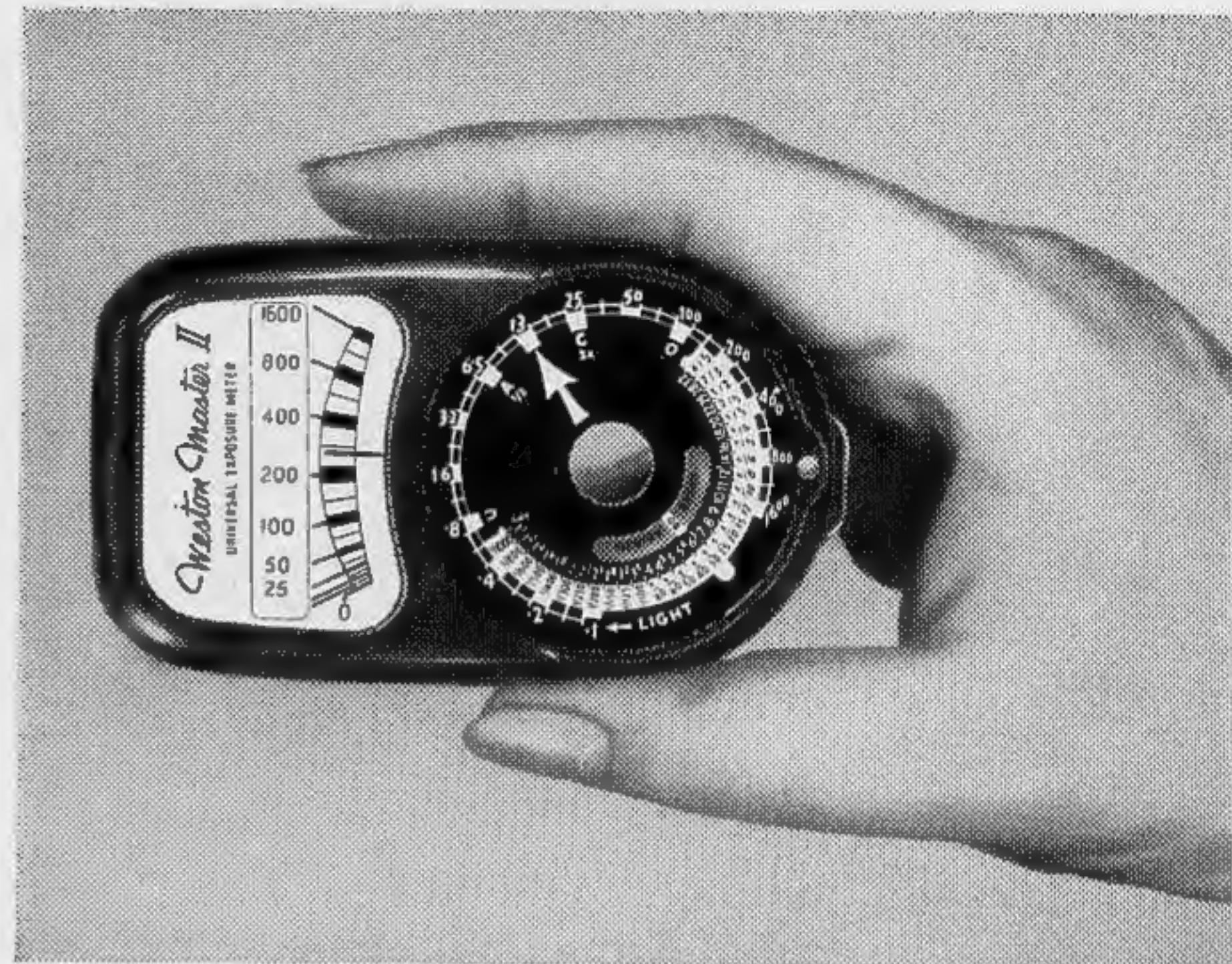
## CLASSIFICATION OF SCENES

It will simplify the classification of scenes to remember that the exposure meter measures the average value of light or brightness coming from the entire scene. Thus for normal exposures the Arrow position on the exposure dial is used. For scenes requiring less than normal exposure an "A" position is provided; for those requiring more, a "C" position is provided.

Flat scenes lacking in contrast, such as distant views and landscapes on dull days, generally require less than normal exposure and more than normal development for best reproduction. Set the "A" position on the exposure dial opposite the light value measured for such scenes.

The contrast scene such as a sunlit street with dark shadows for best reproduction requires more than normal exposure and less than normal development. Set the "C" position on the exposure dial opposite the light value measured for these scenes.

Remember, however, that about eighty per cent. of all scenes require a normal exposure and when in doubt about any scene, use the Arrow position on the exposure dial.

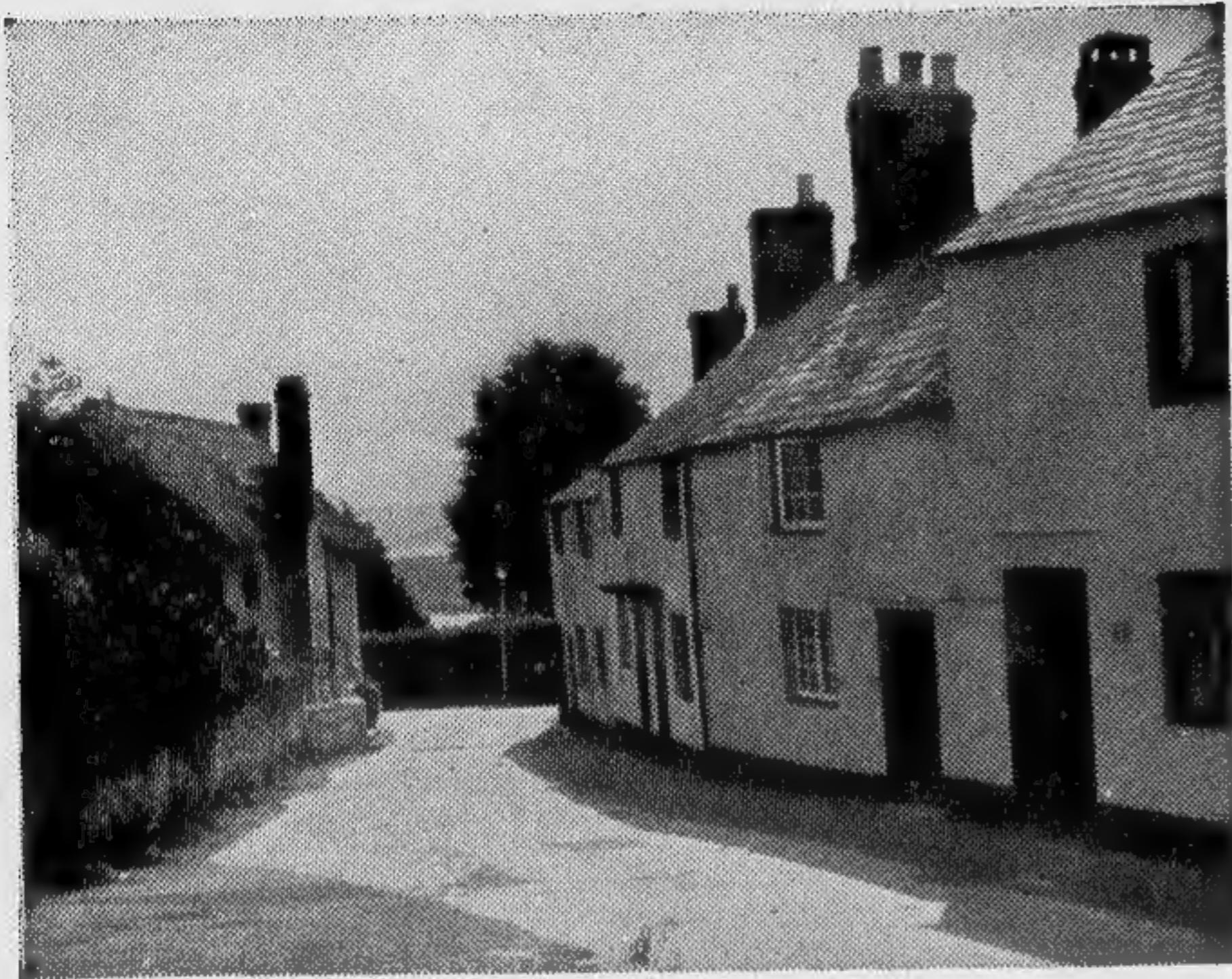


### Aiming the Meter

Aim the meter as shown above, looking across the top of the case at the subject. Tilt the meter slightly downwards to avoid measuring the sky, which, being very much brighter than the rest of the subject will "inflate" the reading, resulting in under exposure. See that the photo-cell is not obstructed by your fingers or the neck cord.

When making close up readings, make sure that you do not cast a shadow with the meter or with your hand on the object being measured.

## CAMERA POSITION METHOD

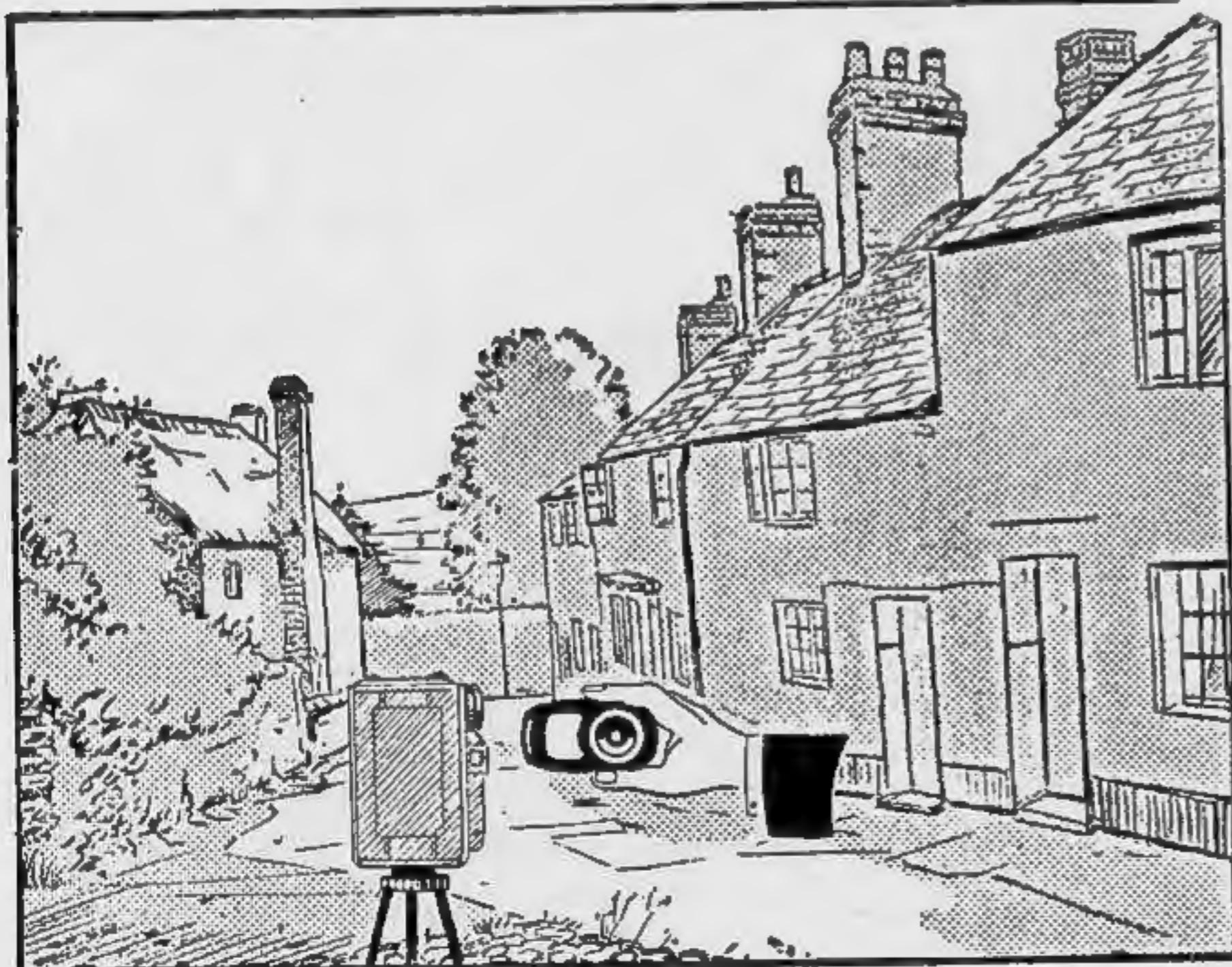


The normal method of use of the meter is at the camera position i.e. close to the camera. It is a simple method and the one used most frequently by photographers. This method gives a correct exposure for the overall scene and does not isolate any particular object from an exposure point of view.

Make a light reading (avoiding sky areas) and set the exposure dial as already described. Choose a combination of f/stop and shutter speed consistent with the scene to be photographed. A fast shutter speed is required if there is action, or a small aperture (high f/stop number) if maximum depth of field is needed.

Generally, the Arrow position on the exposure dial should be used. For flat scenes, or for scenes with extreme contrast of highlights and shadows, use the "A" or "C" position as described on Page 7.

The camera position method should not normally be used for back-lighted snow, sand or water, since specular reflections can result in under exposure of the shadowed areas. (See Brightness Range Method). But for landscapes, general views and other photographs where a quick reading is wanted the camera position method is quite satisfactory.



## THE CLOSE-UP METHOD

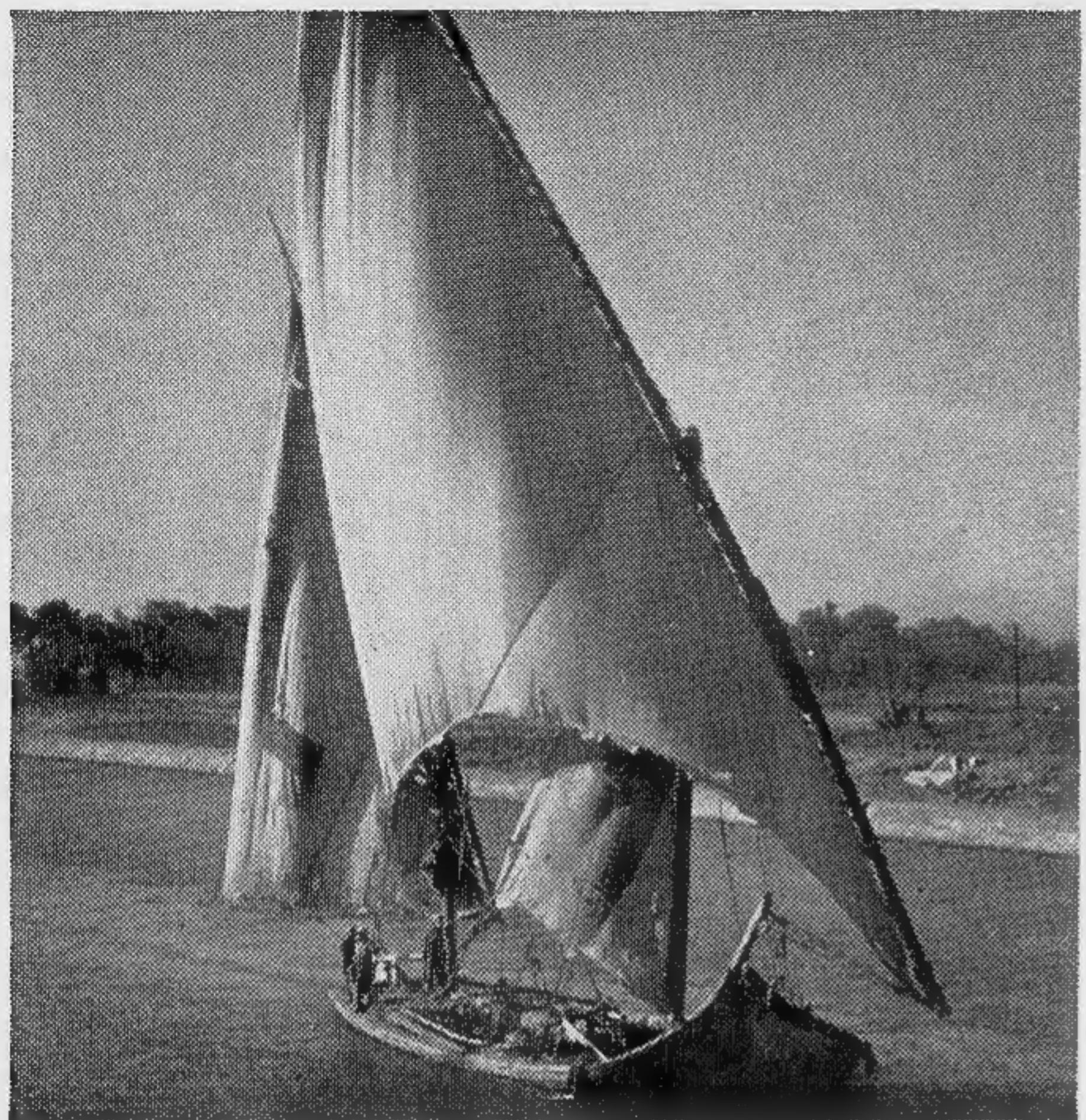
In the close-up method the meter is held close to the object being photographed. In this way the film is exposed particularly for the one object of interest and the background is subjugated accordingly.

Hold the meter close to the principal object, about as far away as the object's smallest dimension. The meter can be held closer than this distance, but no farther away. If the object is the face 6 inches is sufficient. The distance can be increased to say 5 feet if it is desired to isolate a small group of people from the background, or even to 10 feet in the case of larger surfaces. Make quite certain, however, that no light reaches the cell from unimportant objects.

When making a reading, make sure that you do not cast a shadow on the subject with the meter or with your hand. Also do not let your body interfere with the natural illumination of the subject. To avoid casting shadows, the meter may have to be held at an angle to the direct light on the subject, i.e. you can measure the reflected brightness by standing slightly to one side.

Having taken a close-up light reading, set the exposure dial to the Arrow position and make your camera settings.





## BRIGHTNESS RANGE METHOD

The Brightness Range Method consists of measuring the light values of the lightest and darkest objects of the subject and thereby balancing the exposure midway between the two extremes. It is the most accurate method known for the determination of correct exposure and is recommended for the best possible negative from an exposure viewpoint.

In an average scene, various objects reflect different amounts of light—the dark objects little light, the bright objects much light. In a fine photograph, all objects should be correctly exposed and thus the above extremes should be measured.

Make a close-up reading of the darkest object (for example, a dark hedge) in the scene and note the light value. Then make a close-up reading of the brightest object (for example, a white wall) again noting the light reading. If you are not sure which are the darkest and lightest objects measure several that appear so, and take the lowest and highest readings respectively.

Set the Arrow on the exposure dial midway between the darkest and brightest object light values, i.e. the Arrow should be the same number of divisions or blocks from the darkest light value, as it is from the brightest. You can then read off the correct combinations of f/stop and shutter speed for the scene.

Most films can record a long range of brightness in any one subject, but there are limits to the range of deep shadows and bright highlights which can be

### Substituted Readings

It is not always possible or convenient to take close-up readings. In such cases, substituted readings of nearby similar objects can be made. In the above example, a close-up reading of the hand would be a substitute for the sails of the barge and a close-up reading of the river bank close by would suffice for the darkest object. Similarly, a white handkerchief can often be substituted for a white wall or a lady's blouse. But ensure that the lighting is the same and that the objects are similar.

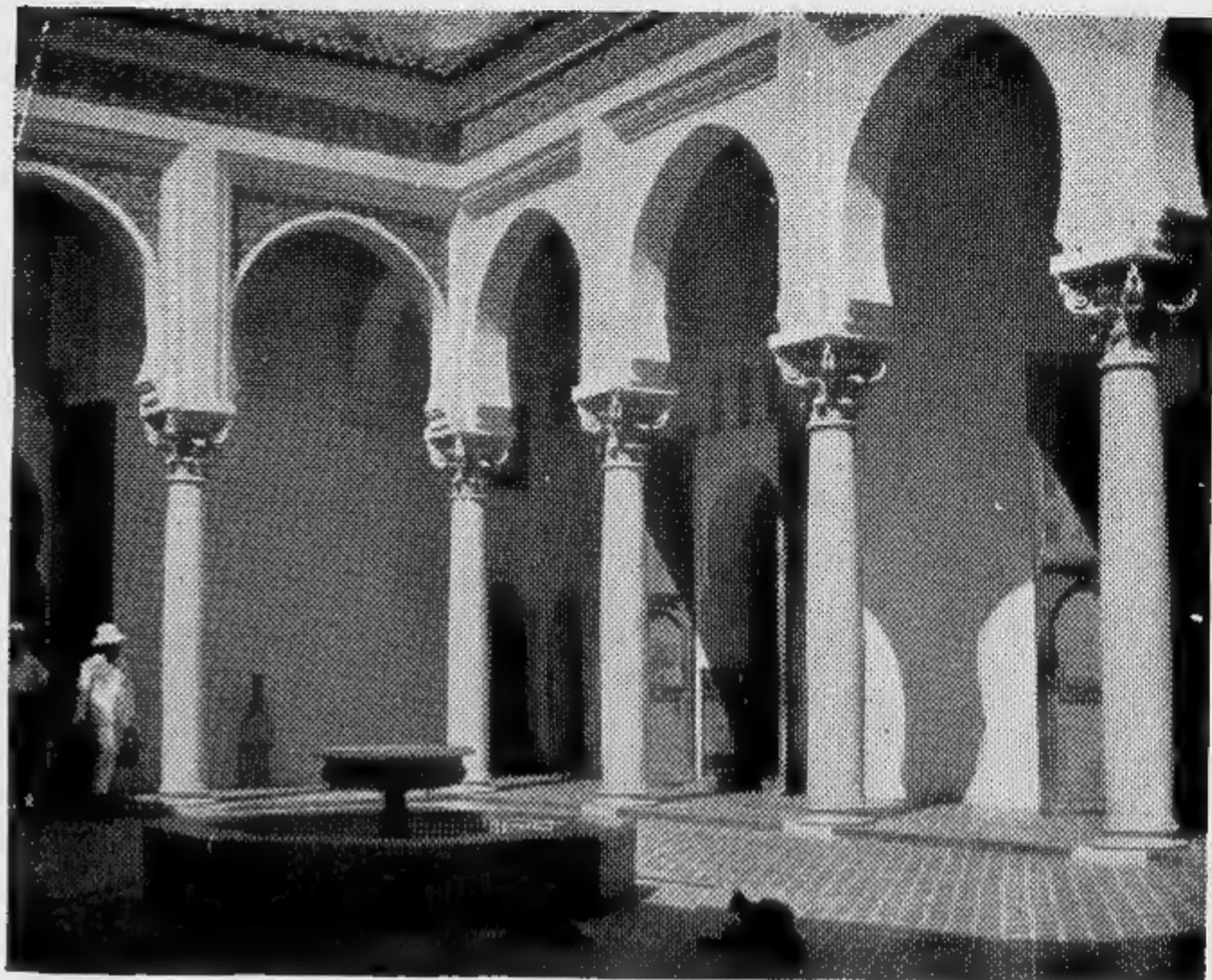
## THE "U" AND "O" POSITIONS

recorded with reasonable truth in a single negative. A knowledge of these limits can prevent unnecessary loss of detail in extreme shadows or highlights when long range subjects are encountered.

The "U" and "O" positions on the exposure dial show the limits of subject brightness which the average film can record on a single negative, the ratio of these being about 128:1. For a given setting of the dial all objects whose light values fall on or between these two limits will be correctly exposed. Any object having a light value below the "U" position will be under-exposed and any object with a light value above the "O" position will be over-exposed.

By setting the "U" position opposite the darkest object light value, the minimum correct exposure will result. If the "O" position is set opposite the brightest object value, the maximum correct exposure will be obtained. The Arrow position gives the normal exposure.

When movement in a scene dictates a minimum exposure, you can use the "U" position and although the densities on the negative will be as thin as is permissible, the exposure will still be correct. On the other hand, in a dark hall or cave, it might be impossible to obtain a reading from anything but the brightest object. By using the "O" position, the maximum range of the negative will be used and correct exposure obtained but the density will be increased.



## Highlights and Shadows

In a scene such as the above, the brightness range greatly exceeds the film range i.e. the patches of sunlight may measure 500 candles per sq. ft. and the deep shadows 1 candle per sq. ft. The average film range is thus not wide enough to give details in both the highlights and shadows, although good average exposure can be obtained by using your meter as already described. According to the effect you require, however, you can choose to expose for details in the shadows by using the "U" position or, alternatively, for detail in the highlights by using the "O" position.

## COLOUR PHOTOGRAPHY



### Colour Film Range

The range of colour film is far more restricted than that of monochrome film. The permissible range of light values is approximately 4 to 1 and this range is covered by the "A" and "C" positions on the exposure dial. The "A" position represents the lower limit and the "C" position the upper limit. Thus after setting the dial for any scene, all objects whose light values fall between these positions will

be correctly exposed. If any objects have a light value below the "A" position, they will be under-exposed and if any have a light value above the "C" position they will be over-exposed. This knowledge enables you to select the best exposure for the colours in which you are most interested.

Brilliance in colour photography is obtained through colour contrast and not from highlights and shadows as in black and white photography. The method recommended for best exposures is the Brightness Range Method described on page 10.

In colour work, black and white should not be considered as colours and must not be measured. First, make a close-up reading of the darkest colour in the scene. Then take a close-up reading of the brightest colour. Set the Arrow position on the exposure dial midway between the light values of the darkest and brightest objects and make your camera setting.

The above method centres the exposure in the middle of the film range and is ideal for the average colour photograph where the colour contrast is low and flatly illuminated. If, however, the dark colours are of principal interest, set the "A" position on the Exposure dial opposite the darkest colour light value. Alternatively, if the brightest colours are of principal interest, set the "C" position opposite the brightest colour light value. These positions match the lower and upper limits of the film range respectively.

Usually the most pleasing colour pictures result from exposure for the brightest colours and remember that slight over-exposure gives better colour rendition than under-exposure. Avoid shadows and extreme contrast in lighting wherever possible.

# CINE PHOTOGRAPHY

A cine camera is essentially the same as a still camera but it exposes a series of pictures in a given interval at a fixed shutter speed. For the best exposure results, the Brightness Range Method described on Page 10 is recommended.

Make close-up readings of the darkest and brightest objects in the scene and set the Arrow position midway between the light values obtained. The correct f/stop to use will then be found opposite the particular shutter speed of your cine camera. In panning the camera, watch the contrast in lighting and, if possible, first determine the correct exposure settings for each part of the scene, altering the f/stop when the camera moves from light to dark areas, etc.

The standard number of frames exposed by the average amateur cine camera is 16 per second at a shutter speed of 1/30th of a second. For other frames per second than 16, the shutter speed is proportional as shown in the following table:—

8 frames per second	1/15th
16	" "
24	" "
32	" "
48	" "
64	" "

1/30th

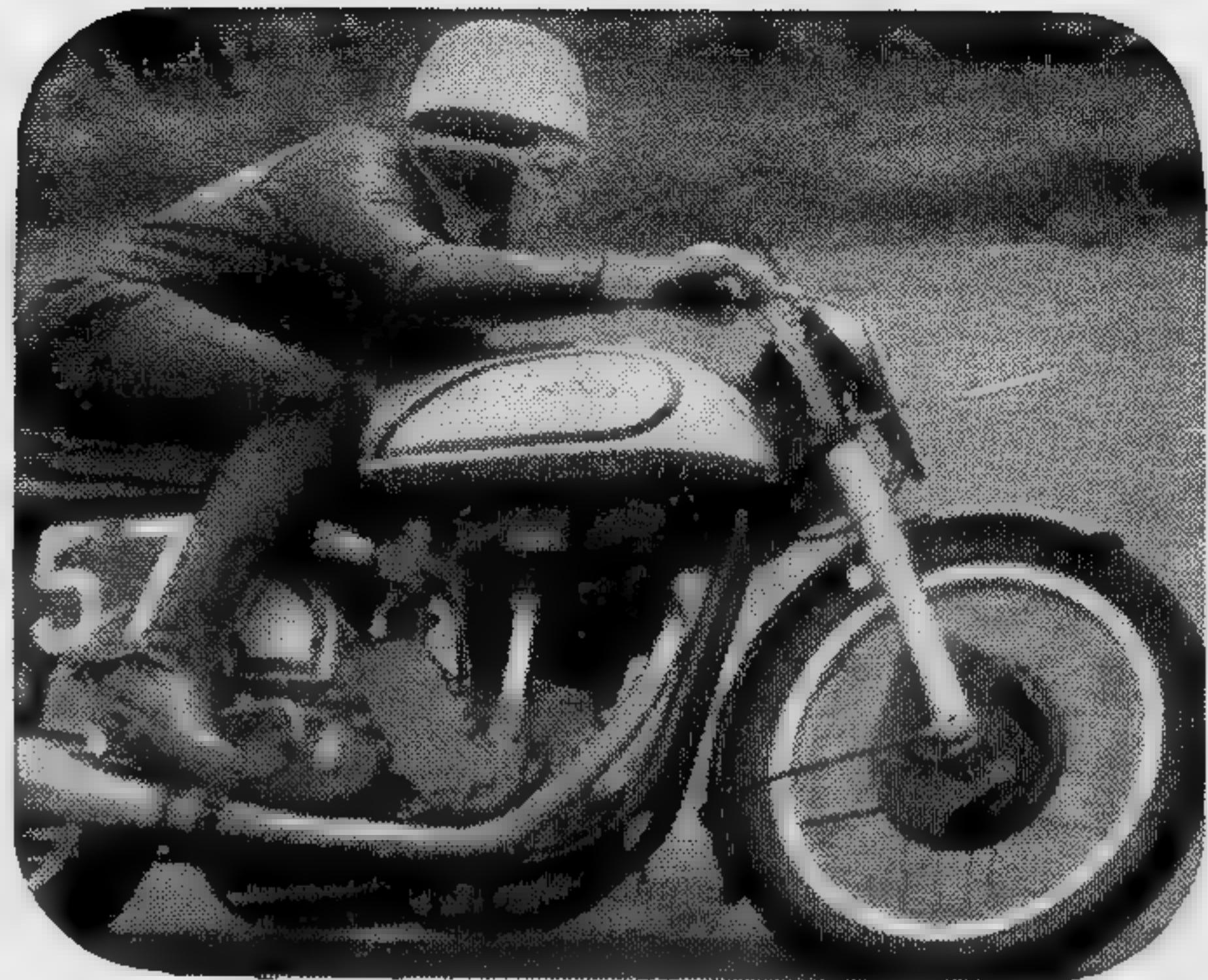
1/45th (use 1/40th)

1/60th

1/90th (use 1/100th)

1/120th (use 1/130th)

Some cameras may have a different shutter speed at 16 frames per second, such as 1/40th or 1/50th, and the f/stop for these should be read off against this shutter speed on the exposure dial. If the shutter speed of your camera is unknown, ascertain it from the camera manufacturer.



## Colour Cine Film

Follow the accompanying instructions and those given for still colour film photographs. Avoid extreme lighting conditions and allow the colour to provide all the necessary contrast. For outdoor shots, expose between 10 a.m. and 3 p.m. if possible as the quality of the light is normally best during that period. If the sun is shining it should be directly behind the camera. Watch the reflection values of the surroundings, i.e. a white dress can be turned pink by a red reflection. Avoid shadows and subjects in shadow. These are illuminated by skylight which is bluer than sunlight for which the film is balanced. In an ideal scene, the colour contrast is low, flatly illuminated and it is taken on a clear sunny day.



## Back Lighted Subjects

If the meter is aimed directly at a back-lighted subject, i.e. one where the main lighting comes from behind, it is obvious that the light value reading can be inflated resulting in under-exposure. To overcome this, turn around and make the reading on a similar object with your back to the lighting. For example,

## ADDITIONAL NOTES

in the above picture a close-up reading could be made of your hand for the girl's face or a handkerchief for her dress. This applies to all beach scenes where sand is back-lighted, or sparkling snow scenes. Take the light reading on the snow or sand with the sun over your shoulder. Direct reflections from sparkling water should be avoided when taking light readings.

These instructions obviously do not refer to the position of the camera.

## Filters

Filters have ■ multiplying factor in relation to the film with which they are used and the exposure required must be increased accordingly. The easiest method of making this increase is to divide the filter factor into the Weston speed of the film and set the exposure dial on the meter with the resultant value. For example the filter factor using a certain film, may be 2 and the film speed 100. Dividing 100 by 2, the result, 50, is used to set the film speed on the exposure dial.

## Equipment Errors

Photographic equipment is sometimes subject to small errors, e.g., in shutter speeds and f/stops. Usually these errors cancel each other, but it is possible for them to be additive, resulting in consistently over- or under-exposed films. These errors can be compensated for by adjusting the listed film speeds, lowering them if results are consistently under-exposed and raising them if over-exposed.

## Weston Film Speeds

Different developers have an influence on the effective emulsion speed value of ■ film. A note is made of this in the Weston Film Speed List.

## **CARE OF YOUR EXPOSURE METER**

1. Your "Master" Meter is rugged and well made but like a fine watch, which it resembles in many ways, it should be treated with all reasonable care.
2. If the pointer of your meter does not register zero when no light strikes the cell, it requires a slight adjustment. Cover the cell with your hand or a card and with a small screwdriver rotate the small screw on the back of the meter below the cell until the pointer rests on zero. Tilt the meter at an angle of about 45° when making the adjustment. Zero adjustment, however, is only very occasionally necessary and should be made with great care.
3. Do not leave the photo-cell exposed to strong sunlight for long periods. This treatment is harmful. Keep the meter in its case or box when not in use.
4. Do not drop the meter, otherwise its jewelled bearings may suffer.
5. Do not overheat the meter by leaving it on a hot radiator, etc. Normal temperature or even abnormal summer temperatures will not harm the meter.
6. Your "Master" meter is moisture proof but not waterproof, so do not drop it in the lake.

If your meter is in need of repair, take it to your regular photographic dealer.

If this is not possible, pack the meter very carefully and return it with details of fault to :—

**Repair Department  
SANGAMO WESTON LTD.  
Great Cambridge Road, Enfield, Middlesex, England**

## INTRODUCTION A LA PHOTOGRAPHIE MESURÉE

Votre posemètre est conçu pour mesurer la lumière réfléchie ou luminosité avec une précision scientifique vous permettant d'obtenir des photographies de réelle qualité.

L'exposition est le produit du temps pendant lequel la lumière réfléchie par le sujet agit sur le film, multiplié par l'intensité de la lumière qui frappe ce film.

Les moyens de réglage de l'exposition sont l'ouverture du diaphragme et la vitesse de l'obturateur; la première règle l'intensité de la lumière, et la seconde le temps pendant lequel la lumière agit sur le film.

### Mode d'emploi du Posemètre Weston Master

La légende suivante devra être lue en s'aidant de l'illustration à la page 2.

- A. Echelle de luminosité indiquant la luminosité du sujet.
- B. Chiffres sur le cadran du calculateur correspondants à l'échelle ci-dessus.
- C. Bouton de déblocage du cadran pour le réglage de la rapidité de l'émulsion.
- D. Ouverture indiquant le réglage de la rapidité d'émulsion.
- E. Onglet de rotation du cadran pour réglage de rapidité.
- F. Chiffres indiquant les ouvertures du diaphragme.
- G. Chiffres indiquant les vitesses d'obturateur (temps de pose).

## INTRODUCCIÓN A LA FOTOGRAFÍA CON EXPOSICIÓN MEDIDA

El medidor de exposiciones se destina a medir la luz reflejada o brillantez con exactitud científica, haciendo segura una calidad real en las fotografías.

La exposición es el producto de la duración del tiempo que la luz que viene de la vista actúa sobre la película, multiplicada por la cantidad de luz que cae sobre dicha película.

Los controles de la exposición son la abertura de la lente y la velocidad del obturador; la primera controla la cantidad de luz y la segunda la duración del tiempo con que la luz actúa sobre la película.

### Manera de Usar el Medidor de Exposiciones Weston Master

La clave siguiente debe ser leída en conjunción con la ilustración de la página 2.

- A. Escala de la luz que registra el valor de la luz de la vista.
- B. Cifras en el cuadrante del calculador que corresponden a los valores del párrafo anterior.
- C. Botón para soltar el cuadrante para poner en su punto la velocidad de la película.
- D. Ventana que indica la puesta en su punto de la velocidad de la película.
- E. Orejeta para girar el cuadrante para las velocidades de las películas.
- F. Cifras que indican los números focales (aberturas de la lente).
- G. Cifras que indican las velocidades del obturador (tiempo).

## Cadran du Calculateur

Le cadran du calculateur transforme les lectures de luminosité en combinaisons correctes d'exposition. Pour obtenir ces combinaisons, pressez d'abord le bouton "C", ensuite tournez l'onglet "E" jusqu'à ce que le chiffre de rapidité d'émulsion Weston apparaisse dans la fenêtre "D". Présentez alors le posemètre vers le sujet, en le penchant légèrement vers le bas, afin d'éviter de mesurer le ciel, et notez la lecture sur l'échelle des luminosités "A". Tournez le cadran du calculateur jusqu'à ce que son index vienne en face des chiffres correspondant à la lecture de luminosité, voir "B". Les réglages corrects de votre appareil sont maintenant face à face—les ouvertures de diaphragme sur l'échelle "F" et les temps de pose sur l'échelle "G".

## Echelles des Grandes et Faibles Luminosités

Le posemètre est pourvu d'une échelle à grande luminosité et d'une échelle à faible luminosité (voir illustrations "J" et "K", page 3), permettant de mesurer des luminosités de 0 à 1600 bougies par pied carré. On se sert de l'échelle de grande luminosité pour tous les sujets de luminosité moyenne ou brillante. Lorsque la lecture de luminosité est au-dessous de 50, on doit se servir de l'échelle de faible luminosité. Celle-ci est mise en opération en dégageant le loquet "H", maintenant le cache à charnière placé sur la face arrière du posemètre (voir l'illustration à la partie supérieure droite de la page 5), et en retournant le cache contre le boîtier jusqu'à l'enclenchement du loquet qui le maintiendra grand ouvert.

## Classification des Sujets

Le posemètre mesure la valeur moyenne de la lumière ou luminosité provenant de l'ensemble de la scène. Ainsi pour les expositions normales, c'est la flèche du

## Cuadrante del Calculador

El cuadrante del calculador convierte las lecturas de la luz en las combinaciones correctas de exposición. Para obtener estas combinaciones, primero, se oprime el botón "C", y después se hace girar la orejeta "E" hasta que aparece en la ventana "D" el número Weston de velocidad. A continuación se coloca el medidor apuntando a la vista, inclinándolo ligeramente hacia abajo para evitar la medición del cielo, y se toma nota de la lectura en la escala de la luz "A"; se gira el cuadrante del calculador hasta que la flecha apunta a las mismas cifras que la lectura de la luz, véase "B". Las puestas a punto correctas para la cámara están ahora la una enfrente de la otra directamente—los números focales están en la fila "F" y las velocidades del obturador en la fila "G".

## Escalas para Luz Intensa y Luz Débil

El medidor está provisto de una escala para luz intensa y otra escala para luz débil (véanse las ilustraciones "J" y "K" en la página 3) que cubren un campo de 0 a 1600 bujías por pie cuadrado. La escala de luz intensa es para uso con todos los objetos iluminados con luz media y luz brillante. Cuando la lectura de la luz es de menos de 50 bujías por pie cuadrado, se debe usar la escala de luz débil. Esta escala se pone en operación soltando el pestillo "H" que sujet a un disco deflector en la trasera del medidor (véase la ilustración de la parte superior derecha de la página 5), y haciendo girar el disco deflector hacia atrás contra la caja, de modo que se enganche el pestillo y mantenga el disco abierto.

## Clasificación de las Vistas

El medidor de exposiciones mide el valor medio de la luz o brillantez que viene de la vista entera. Por tanto, para exposiciones normales se usa la posición de la

cadrans du calculateur qu'il faut utiliser. Pour les scènes qui demandent un temps de pose inférieur à la normale, c'est-à-dire les scènes manquant de contrastes, on a prévu le repère "A". Pour celles qui demandent plus d'exposition que la normale, c'est-à-dire pour les scènes présentant des contrastes, on a prévu le repère "C".

## Méthode de la Gamme des Luminosités

Cette méthode est recommandée pour obtenir de bonnes photographies lorsqu'il est indispensable que tous les objets d'une scène soient correctement exposés. Elle consiste à mesurer la luminosité de l'objet le plus brillant et celle de l'objet le plus sombre du sujet.

Pour cela, prenez une lecture de premier plan de l'objet le plus sombre et une lecture de premier plan de l'objet le plus brillant, placez ensuite la flèche du cadran du calculateur au milieu de l'intervalle compris entre la luminosité de l'objet le plus sombre et celle de l'objet le plus brillant. Vous pouvez alors choisir les combinaisons correctes de diaphragme et d'obturateur pour la scène en question.

S'il n'est pas possible de prendre une lecture de premier plan, on peut faire des lectures sur des objets de même nature, mais alors il faut s'assurer que les conditions de luminosité sont bien les mêmes et que les objets sont semblables.

## Les Repères "U" et "O"

Les repères "U" et "O" du cadran du calculateur donnent les limites de la gamme de luminosité que la plupart des pellicules peuvent enregistrer sur un seul négatif. Pour un réglage donné du cadran, tous les objets dont la luminosité tombe sur ou entre ces limites seront correctement exposés.

Dans un sujet où la gamme de luminosité dépasse de

flecha del cuadrante del calculador. Para vistas que necesiten una exposición menor que la normal, es decir, vistas que carezcan de contraste, el aparato está provisto de una posición "A"; y para aquellas vistas que necesiten una exposición mayor que la normal, es decir, vistas con contrastes, el aparato lleva una posición "C".

## Método de los Límites de Brillantez

El método de los límites de brillantez se recomienda para buenas fotografías en las que es esencial que todos los objetos de la vista tengan una exposición correcta, y consiste en medir los valores de la luz de los objetos más brillantes y de los objetos menos brillantes de la vista.

Esto se consigue tomando una lectura desde muy cerca del objeto más oscuro y haciendo otra lectura de una manera semejante del objeto más brillante. A continuación se coloca la flecha del cuadrante del calculador en el punto medio entre los valores de la luz del objeto más oscuro y del objeto más brillante. Entonces se pueden leer las combinaciones correctas de número focal y velocidad del obturador para la vista.

Si no fuera posible tomar una lectura muy de cerca, se pueden tomar lecturas substitutas pero hay que asegurarse de que las condiciones de iluminación son las mismas y de que los objetos son semejantes

## Las Posiciones "U" y "O"

Las posiciones "U" y "O" en el cuadrante del calculador muestran los límites de la brillantez del objeto que la película media puede registrar en una sola negativa. Para una preparación dada del cuadrante, todos los objetos cuyo valor de luz caiga en esos límites o entre ellos, tendrán una exposición correcta.

En una vista en la que el campo de brillanteces exceda

beaucoup la sensibilité de la pellicule, le détail dans les parties les plus ombrées comme dans les parties les plus ensoleillées devra évidemment être sacrifié. En plaçant le repère "U" en face de la lecture de luminosité de l'objet le plus sombre, on obtiendra le temps minimum de pose correct, mais si c'est le repère "O" que l'on place en face de la lecture de luminosité de l'objet le plus brillant, on obtiendra le temps maximum de pose correct. On peut aussi obtenir un temps de pose moyen en servant du posemètre comme il a été décrit précédemment.

## Photographie en Couleurs

La sensibilité des pellicules en couleurs est celle indiquée par les repères "A" et "C" du cadran du calculateur. Tous les objets dont la luminosité tombe entre ces repères seront correctement exposés. Les objets ayant une luminosité inférieure à celle de "A" seront sous-exposés, tandis que ceux dont la luminosité sera supérieure à celle de "C" seront sur-exposés.

La luminosité dans la photographie en couleurs est obtenue par le contraste des couleurs, et la méthode recommandée pour obtenir le meilleur temps de pose est la méthode de la gamme des luminosités. Il y a lieu de se rappeler que le blanc et le noir ne doivent pas être considérés comme des couleurs et qu'ils ne doivent pas être mesurés. Faites une lecture de premier plan sur la couleur la plus vive et sur la couleur la plus sombre, et placez la flèche du cadran d'exposition au milieu de l'espace compris entre ces deux lectures de luminosité.

La méthode de la gamme des luminosités centre l'exposition au milieu de l'intervalle de sensibilité de la pellicule, elle est idéale pour la plupart des photographies en couleurs. Si cependant les couleurs sombres sont le principal intérêt, placez le repère "A" du cadran du calculateur en face de la luminosité de la couleur la plus sombre. Si, au contraire, ce sont les couleurs claires

con mucho del campo de la película, como es natural, habrá que sacrificar detalles del objeto más oscuro y/o del objeto más brillante. Poniendo la posición "U" de modo que esté enfrente del valor de la luz del objeto más oscuro, se obtendrá la exposición correcta mínima, pero si se pone la posición "O" enfrente de la luz del objeto más brillante, se obtendrá la exposición correcta máxima. Alternativamente, se puede obtener una exposición media empleando el medidor como ya se ha descrito.

## Fotografía en Colores

El campo de películas para fotografía en colores está cubierto por las posiciones "A" y "C" en el cuadrante del calculador. Todos los objetos cuyo valor de luz caiga entre esas posiciones tendrán una exposición correcta. Los objetos que tengan un valor de luz por debajo de la posición "A" estarán con poca exposición y todos los objetos que tengan un valor de luz por encima de la posición "C" estarán con una exposición excesiva.

La brillantez en la fotografía en colores se obtiene por medio del contraste entre los colores y el método que se recomienda para obtener la exposición mejor es el método de los límites de brillantez. Se debe recordar que el negro y el blanco no se consideran como colores y no se deben medir. Se debe tomar una lectura muy de cerca de los colores más brillantes y otra de los colores más oscuros y la flecha del cuadrante de exposiciones se debe colocar en el punto medio entre los dos valores de luz obtenidos.

El método de los límites de brillantez centra la exposición en el medio del campo de la película y es ideal para los trabajos medios en color. Sin embargo, si los colores oscuros fueran los de interés principal, póngase la posición "A" en el cuadrante del calculador enfrente del valor de luz del color más oscuro; y alternativamente

que vous voulez mettre en relief, placez le repère "C" en face de la luminosité de la couleur la plus claire.

## Cinématographie

Les appareils de prise de vues de cinéma exposent une série d'images à un intervalle de temps déterminé et à une vitesse d'obturateur constante. Les ouvertures de diaphragme servent à compenser les variations de l'intensité lumineuse et, de ce fait, l'exposition du film particulier avec lequel votre appareil est chargé.

Pour obtenir les meilleurs résultats du point de vue de l'exposition, il est recommandé d'employer la méthode de la gamme des luminosités qui a été décrite précédemment. En vous servant de cette méthode pour la cinématographie, vous trouverez l'ouverture correcte de diaphragme à utiliser juste en face de la vitesse d'obturateur propre à votre caméra sur le cadran du calculateur.

Le nombre d'images par seconde est proportionnel à la vitesse d'obturateur, comme il est montré sur la table se trouvant à la page 11.

## Films Ciné en Couleurs

Suivez les instructions qui précèdent et celles qui sont données pour les photographies en couleurs.

## A NOTER ÉGALEMENT

### Sujets a Contre-Jour

Si vous dirigez le posemètre directement sur un sujet éclairé à contre-jour, la lecture de luminosité sera

si los colores brillantes fueran los de interés principal, entonces, póngase la posición "C" enfrente del valor de la luz del color más brillante.

## Fotografía Cinematográfica

Las cámaras cinematográficas hacen la exposición de una serie de fotografías en un intervalo dado a una velocidad de obturador fijada. El número focal controla las variaciones en la intensidad de la luz y, por tanto, la exposición de la película particular con que está cargada la cámara.

Para obtener los mejores resultados de la exposición se recomienda el método de los límites de brillantez, que se ha descrito anteriormente. Empleando este método para la fotografía cinematográfica, se necesita emplear el número focal que está directamente enfrente de la velocidad de obturador particular de la cámara de toma, en el cuadrante del calculador.

El número de fotografías tomadas por segundo es proporcional a la velocidad del obturador como se muestra en la tabla de la página 11.

## Películas Cinematográficas en Colores

Síganse las instrucciones citadas y las que se han dado para la fotografía en colores de imágenes fijas.

## NOTAS ADICIONALES

### Fotografía a Contraluz

Si el medidor está dirigido directamente a un objeto iluminado a contraluz, la lectura del valor de la luz se inflará y dará como resultado una exposición

exagérée et il en résultera une sous-exposition. Pour éviter cela, tournez le dos au sujet et prenez une lecture sur un objet semblable avec la lumière derrière vous.

## Filtres

Les filtres ont un facteur de multiplication s'appliquant à la pellicule avec laquelle ils sont utilisés, et l'exposition doit être augmentée en conséquence. La méthode la plus simple pour faire cette correction est de diviser le chiffre de rapidité d'émulsion Weston par le facteur de correction du filtre et de régler le cadran du calculateur du posemètre à la valeur ainsi trouvée.

insuficiente. Para vencer esta dificultad, la persona que maneja el medidor debe dar la vuelta y tomar una lectura con un objeto semejante dando la espalda a la luz.

## Filtros

Los filtros tienen un factor de multiplicación con relación a la película con la que se usan y la lectura del medidor de exposiciones se debe aumentar de acuerdo. El método más fácil de hacer este aumento es dividir la velocidad Weston de la película por el factor del filtro y poner el cuadrante del calculador en el medidor con el valor resultante.

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